

REMARKS

Claims 2, 6, 7, 9, 11, 14, 16-19, 32-36, 38, 39, 41-46 and 48 have been amended. Claims 1, 8, 31, 40 and 47 have been canceled. Claims 2-7, 9-30, 32-39, 41-46 and 48 remain in the application for consideration. In view of the following remarks, Applicant respectfully requests withdrawal of the rejections and forwarding of the application onto issuance.

Specification Objection

The abstract has been objected to as containing too many words. The abstract section has been amended to contain less than 150 words thus overcoming the Office's objection.

Claim Objections

Claims 17-19, 28-30, 38, 39, 45 and 46 stand rejected under 37 CFR 1.75(c) as being of improper dependent form for failing to limit the subject matter of a previous claim. Applicant respectfully disagrees.

Section 1.75(c) of Title 37 of the CFR states, in pertinent part:

One or more claims may be presented in dependent form, referring back to and further limiting another claim or claims in the same application.

Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim.

Claim 17, as amended, depends from claim 2 and recites "[a] portable computing device programmed with instructions that implement the method of

1 claim 2.” Thus claim 17 is an *apparatus* claim. Claim 2, in turn, is a *method*
2 claim that recites a method of operating a portable device. As written, claim 17
3 refers back to and further limits claim 2 in accordance with 37 CFR 1.75(c).
4 Specifically, as written, claim 2 covers the *specific method* recited therein. Claim
5 17, however, recites a portable computing device programmed with instructions
6 that implement the method of claim 2. Thus, claim 17 further limits the subject
7 matter of claim 2 by reciting a different statutory class of subject matter.

8 Applicant can find nothing in Title 37 of the CFR or in the MPEP which
9 proscribes this type of claim. As such, Applicant respectfully submits that claim
10 17, as well as claims 18, 19, 28-30, 38, 39, 45 and 46 are in proper dependent form
11 and are fully compliant with Title 37 of the CFR.

12 13 The Claim Rejections

14 Claims 1, 6-7, 9-19, 31, 35, 38-40, 42 and 44-47 stand rejected under 35
15 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,533,875 to Dowling et al.
16 (hereinafter “Dowling”).

17 Claims 2-5, 8, 20-21, 23-27, 30, 32-34, 36, 41, 43 and 48 stand rejected
18 under 35 U.S.C. §103(a) as being unpatentable over Dowling in view of U.S.
19 Patent No. 6,343,291 to Goldman.

20 Claims 22 and 37 stand rejected under 35 U.S.C. §103(a) as being
21 unpatentable over Dowling and Goldman in further view of a reference to Fulton
22 entitled “Computer Maintenance, Part 1 First Step: Spring Cleaning”, (hereinafter
23 “Fulton”).
24
25

The §103 Standard

In making out a §103 rejection, the Federal Circuit has stated that when one or more reference or source of prior art is required in establishing obviousness, “it is necessary to ascertain whether the prior art *teachings* would appear to be sufficient to one of ordinary skill in the art to suggest making the claimed substitutions or other modification.” *In re Fine*, 5 USPQ 2d, 1596, 1598 (Fed. Cir. 1988). That is, to make out a *prima facie* case of obviousness, the references must be examined to ascertain whether the combined *teachings* render the claimed subject matter obvious. *In re Wood*, 202 USPQ 171, 174 (C.C.P.A. 1979).

Moreover, there is a requirement that there must be some reason, suggestion, or motivation *from the prior art*, as a whole, for the person of ordinary skill to have combined or modified the references. *See, In re Geiger*, 2 USPQ 2d 1276, 1278 (Fed. Cir. 1987). Additionally, *particular findings* must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed. *See, e.g., In Re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000).

It is impermissible to use the claimed invention as an instruction manual or “template” to piece together the teachings of the prior art so that the claimed invention is rendered obvious. One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fritch*, 23 USPQ 2d 1780, 1784 (Fed. Cir. 1992).

A factor cutting against a finding of motivation to combine or modify the prior art is when the prior art *teaches away* from the claimed combination. A reference is said to teach away when a person of ordinary skill, upon reading the

1 reference, would be led in a direction divergent from the path that the applicant
2 took. *In re Gurley*, 31 USPQ 2d 1130, 1131 (Fed. Cir 1994).

3 In order for a *prima facie* case of obviousness to be made, the resulting
4 combination or motivation must appear to show or suggest the claimed invention.
5 *In re Nielson*, 2 USPQ 2d 1525, 1528 (Fed. Cir. 1987).

6 In view of the standard for establishing a *prima facie* case of obviousness,
7 Applicant respectfully disagrees with the Office's rejections of the present claims
8 and submits that the Office has not established a *prima facie* case of obviousness
9 for those claims that are rejected under §103(a).

10 11 Applicant's Disclosure

12 Applicant's disclosure is directed to environment-interactive context-aware
13 devices, methods and architectures. As noted in the specification, the various
14 devices, methods and architectures support environment interactivity in that such
15 devices, methods and architectures are able to interact with their location
16 environment in a manner that is specific to the location. See, e.g. page 51, lines 2-
17 18.

18 19 The Goldman Reference

20 Goldman is directed to apparatus and methods for accessing an information
21 repository. Goldman teaches systems and methods for using an information model
22 to create a location tree in a hierarchy of information based on one or more
23 information repositories. See, e.g. column 1, lines 5-11.

24 In Goldman's background section, Goldman describes aspects of the
25 environments in which its teachings apply. Specifically, Goldman instructs that

1 information repositories, i.e. databases, typically hold a wealth of information, but
2 that accessing such information can be difficult and inefficient. See, e.g. column
3 1, line 32 through column 2, line 40. Thus, as noted by Goldman in the
4 concluding paragraph of its background section, "a need exists...for meaningful
5 and easy access to information in an information repository that provides the detail
6 of information available from a custom program without the time and expense of
7 creating one...."

8 Thus, Goldman's teachings are directed to systems that process information
9 associated with a database, including such things as records, fields and the like,
10 and presenting them to a user in a purportedly more organized and useful form.
11 Perhaps Goldman's teachings are best appreciated starting with an excerpt that
12 begins in column 8, at line 7, which excerpt is reproduced below for the
13 convenience of the Office:

14
15 Using an information model to create a hierarchy allows the user to
16 see two things. *First, a hierarchy gives a user the ability to see how*
17 *information in an information repository is organized and the*
18 *relationship between information in the information repository via*
19 *derived containers that represent user-defined categories of the*
20 *information.* Secondly, derived containers in a derived hierarchy allow a
21 user to view logical subsets of information in the information repository.
22 For example, an information model can be used to create a database
23 hierarchy that hierarchically and logically presents information in a
24 database to a user.

25 In presenting a hierarchical and logical view of information in a
database, an information model allows a user to see two things. First, a
hierarchy gives a user the ability to see how data in a database is organized
and the relationship between data, i.e. fields, in the database. When a
derived hierarchy is created in a preferred embodiment, derived containers
are displayed such that hierarchical organization is conveyed to the user. In
other words, a derived container can convey a category of information in
the database as defined by its corresponding value-defined container

1 definition node. A category of information corresponds to a field from the
2 database from which its selection criteria is based, and the field can be used
3 to create a label of the derived container. In a first embodiment, then, each
4 derived container represents a category of information. Furthermore, if a
5 derived container corresponds to a value-defined container definition node
6 in the second level of information in the information model, a user interface
7 can convey this sense of hierarchy by indenting the label of the derived
8 container in a list user interface, or presenting a secondary window in a
9 graphical window interface, for example.

10 *Secondly, derived containers in a hierarchy allow a user to view*
11 *logical subsets of database records, which are determined by a combined*
12 *selection criteria attribute of a derived container.* Records that are actually
13 extracted from a database using a derived container's combined selection
14 criteria attribute, as will be discussed, are referred to as extracted records.
15 In a preferred embodiment, records are only extracted at a leaf derived
16 container (or a derived container corresponding to a leaf value-defined
17 container definition node), although it is also within the scope of this
18 invention that records may be extracted at any derived container.

19 *In summary, an information model defines how a hierarchy is*
20 *presented to a user as determined by the contents of one or more derived*
21 *containers....*

22 The Claimed Subject Matter

23 **Claim 2** has been rewritten in independent form to include all of the
24 limitations from claim 1 from which it formerly depended. As amended, claim 2
25 recites a method of operating a portable computing device comprising:

- 26 • determining a location of the portable computing device by
27 accessing one or more hierarchical tree structures each of which
28 comprising multiple nodes that represent physical or logical
29 locations; and traversing at least one node on the one or more
30 hierarchical tree structures to ascertain a device location;
- 31 • acquiring digital data associated with the determined location and
32 that can permit the portable computing device to interact with a
33 location environment; and
34 interacting with the location environment based, at least in part, on
35 the acquired digital data.

1
2 In making out the rejection of this claim, the Office argues that Dowling
3 discloses the subject matter of this claim, except for "hierarchical tree structures,
4 wherein nodes would be traversed to access the information concerning the device
5 location." See, Office Action, page 7, paragraph 4. The Office then argues that
6 Goldman discloses "creating and using an organized hierarchical structure with
7 nodes representing location based information, wherein the tree would be
8 traversed to access a specific node containing information that is needed." Based
9 on this, the Office argues that it would be obvious to incorporate Goldman's
10 teaching in Dowling's system to render the claimed subject matter obvious. The
11 Office reasons that Dowling discloses using "some kind of database storage
12 structure" and that Goldman teaches taking a database and using a hierarchical
13 structure to provide a better organized structure where information can be easily
14 accessed.

15 Applicant respectfully disagrees with the Office's interpretation and
16 application of the references and submits that the Office has not established a
17 *prima facie* case of obviousness.

18 First, consider Goldman's *specific teachings* against the backdrop of the
19 problem described in its background section. Specifically, Goldman is concerned
20 with providing a meaningful and easy way to access information in an information
21 repository, i.e. a database, that provides the detail of information available from a
22 custom program without the time and expense of creating one, as well as the cost-
23 effectiveness of querying an information repository without the uncertainties of
24 results and the inefficiencies in obtaining them. See, e.g. column 2, lines 41-50.
25

1 Goldman's solutions, as described in the excerpt above, are directed to
2 using an information model to create a hierarchy that allows a user to *see* two
3 things—first, the user can *see* how information in an information repository is
4 organized and various information relationships, e.g. relationships between data
5 such as database fields and records in the database. Second, Goldman's database-
6 derived hierarchy allows a user to *view* logical subsets of database records.

7 Second, there is nothing whatsoever in Goldman that is directed to
8 determining a "location" or using a hierarchical tree structure to determine
9 location, as that term is utilized in Applicant's specification. Goldman appears to
10 simply be directed to systems and methods that process information associated
11 with a database so that the information can be presented for viewing by a user.

12 It is unclear, at best, how Goldman's presentation teachings could be
13 incorporated with Dowling's disclosure to render obvious a method that
14 determines a location of a portable device by accessing one or more hierarchical
15 tree structures each of which comprising multiple nodes that represent physical or
16 logical locations and traversing at least one node on the one or more hierarchical
17 tree structures to ascertain a device location. As such, Applicant submits that the
18 Office has failed to establish a *prima facie* case of obviousness and this claim is
19 allowable.

20 **Claims 3-19** depend from claim 2 either directly or indirectly and are
21 allowable as depending from an allowable base claim. These claims are also
22 allowable for their own recited features which, in combination with those recited
23 in claim 2, are neither disclosed nor suggested in the references of record, either
24 singly or in combination with one another.

25

1 Claim 20 recites a method of operating a portable computing device
2 comprising:

- 3
- 4 • *determining a location of the portable computing device by*
5 *accessing one or more hierarchical tree structures comprising*
6 *multiple nodes that represent physical or logical locations; and*
7 *traversing at least one node on the one or more hierarchical tree*
8 *structures to ascertain a device location;*
- 9 • acquiring one or more applets associated with the determined
location; and
- 10 • locally executing the one or more applets sufficient to interact with a
location environment.

11 In making out the rejection of this claim, the Office argues, with respect to
12 the bold italicized subject matter, essentially the same combination and rationale
13 using the Dowling and Goldman references. Applicant respectfully disagrees with
14 the Office's interpretation and application of the references and submits that the
Office has not established a *prima facie* case of obviousness.

15 First, consider Goldman's *specific teachings* against the backdrop of the
16 problem described in its background section. Specifically, Goldman is concerned
17 with providing a meaningful and easy way to access information in an information
18 repository, i.e. a database, that provides the detail of information available from a
19 custom program without the time and expense of creating one, as well as the cost-
20 effectiveness of querying an information repository without the uncertainties of
21 results and the inefficiencies in obtaining them. See, e.g. column 2, lines 41-50.

22 Goldman's solutions, as described in the excerpt above, are directed to
23 using an information model to create a hierarchy that allows a user to *see* two
24 things—first, the user can *see* how information in an information repository is
25

1 organized and various information relationships, e.g. relationships between data
2 such as database fields and records in the database. Second, Goldman's database-
3 derived hierarchy allows a user to view logical subsets of database records.

4 Second, there is nothing whatsoever in Goldman that is directed to
5 determining a "location" or using a hierarchical tree structure to determine
6 location, as that term is utilized in Applicant's specification. Goldman appears to
7 simply be directed to systems and methods that process information associated
8 with a database so that the information can be presented for viewing by a user.

9 It is unclear, at best, how Goldman's presentation teachings could be
10 incorporated with Dowling's disclosure to render obvious a method that
11 determines a location of a portable device by accessing one or more hierarchical
12 tree structures comprising multiple nodes that represent physical or logical
13 locations and traversing at least one node on the one or more hierarchical tree
14 structures to ascertain a device location. As such, Applicant submits that the
15 Office has failed to establish a *prima facie* case of obviousness and this claim is
16 allowable.

17 Claims 21-30 depend either directly or indirectly from claim 20 and are
18 allowable as depending from an allowable base claim. These claims are also
19 allowable for their own recited features which, in combination with those recited
20 in claim 20, are neither disclosed nor suggested in the references of record, either
21 singly or in combination with one another. In addition, given the Office's failure
22 to establish a *prima facie* case of obviousness with respect to claim 20, the
23 rejection of claim 22 over the combination with Fulton is not seen to add anything
24 of significance.
25

1 **Claim 32** has been rewritten in independent form to include the subject
2 matter from claim 31 from which it formerly depended. Claim 32 recites one or
3 more computer-readable media having computer-readable instructions thereon
4 which, when executed by a portable computer device, cause the computing device
5 to:

- 6 • ***determine its location by accessing one or more hierarchical tree***
7 ***structures each of which comprising multiple nodes that represent***
8 ***physical or logical locations, and traversing at least one node on***
9 ***the one or more hierarchical tree structures to ascertain a device***
10 ***location;***
- 11 • generate a service query that is configured to identify services that
12 are associated with the location;
- 13 • wirelessly send the query to one or more servers;
- 14 • receive a response from the one or more servers that contains digital
15 data associated with applets that can be executed by the device and
16 that provide a location-specific service; and
- 17 • locally execute the one or more applets to interact with a location
18 environment.

19 In making out the rejection of this claim, with respect to the subject matter
20 appearing in the bold italics above, the Office essentially argues the same
21 combination and rationale using the Dowling and Goldman references. Applicant
22 respectfully disagrees with the Office's interpretation and application of the
23 references and submits that the Office has not established a *prima facie* case of
24 obviousness.
25

 First, consider Goldman's *specific teachings* against the backdrop of the
problem described in its background section. Specifically, Goldman is concerned
with providing a meaningful and easy way to access information in an information
repository, i.e. a database, that provides the detail of information available from a

1 custom program without the time and expense of creating one, as well as the cost-
2 effectiveness of querying an information repository without the uncertainties of
3 results and the inefficiencies in obtaining them. See, e.g. column 2, lines 41-50.

4 Goldman's solutions, as described in the excerpt above, are directed to
5 using an information model to create a hierarchy that allows a user to *see* two
6 things—first, the user can *see* how information in an information repository is
7 organized and various information relationships, e.g. relationships between data
8 such as database fields and records in the database. Second, Goldman's database-
9 derived hierarchy allows a user to *view* logical subsets of database records.

10 Second, there is nothing whatsoever in Goldman that is directed to
11 determining a "location" or using a hierarchical tree structure to determine
12 location, as that term is utilized in Applicant's specification. Goldman appears to
13 simply be directed to systems and methods that process information associated
14 with a database so that the information can be presented for viewing by a user.

15 It is unclear, at best, how Goldman's presentation teachings could be
16 incorporated with Dowling's disclosure to render obvious the subject matter of
17 this claim which is recited to determine a location of a portable device by
18 accessing one or more hierarchical tree structures each of which comprising
19 multiple nodes that represent physical or logical locations, and traversing at least
20 one node on the one or more hierarchical tree structures to ascertain a device
21 location. As such, Applicant submits that the Office has failed to establish a *prima*
22 *facie* case of obviousness and this claim is allowable.

23 Claims 33-39 depend either directly or indirectly from claim 32 and are
24 allowable as depending from an allowable base claim. These claims are also
25 allowable for their own recited features which, in combination with those recited

1 in claim 32, are neither disclosed nor suggested in the references of record, either
2 singly or in combination with one another. In addition, given the Office's failure
3 to establish a *prima facie* case of obviousness with respect to claim 32, the
4 rejection of claim 37 over the combination with Fulton is not seen to add anything
5 of significance.

6 **Claim 41** has been rewritten in independent form to include the subject
7 matter of claim 40 from which it formerly depended. Claim 41 recites a computer
8 architecture comprising:

- 9
- 10 • a location service module configured to wirelessly receive location
11 information and *ascertain a location associated with the location*
12 *information by accessing one or more hierarchical tree structures*
13 *each of which comprising multiple nodes that represent physical or*
14 *logical locations and traversing at least one node on the one or*
15 *more hierarchical tree structures to ascertain a device location;*
16 and
17 • an applet manager operably associated with the location service
18 module and configured to receive and manage applets that can be
19 wirelessly received and that pertain to a location that is ascertained
20 by the location service module, the applets being configured to
21 enable a user of a computer device to interact with a location
22 environment.
23

24 In making out the rejection of this claim, with respect to the subject matter
25 appearing in the bold italics above, the Office essentially argues the same
combination and rationale using the Dowling and Goldman references. Applicant
respectfully disagrees with the Office's interpretation and application of the
references and submits that the Office has not established a *prima facie* case of
obviousness.

1 First, consider Goldman's *specific teachings* against the backdrop of the
2 problem described in its background section. Specifically, Goldman is concerned
3 with providing a meaningful and easy way to access information in an information
4 repository, i.e. a database, that provides the detail of information available from a
5 custom program without the time and expense of creating one, as well as the cost-
6 effectiveness of querying an information repository without the uncertainties of
7 results and the inefficiencies in obtaining them. See, e.g. column 2, lines 41-50.

8 Goldman's solutions, as described in the excerpt above, are directed to
9 using an information model to create a hierarchy that allows a user to *see* two
10 things—first, the user can *see* how information in an information repository is
11 organized and various information relationships, e.g. relationships between data
12 such as database fields and records in the database. Second, Goldman's database-
13 derived hierarchy allows a user to *view* logical subsets of database records.

14 Second, there is nothing whatsoever in Goldman that is directed to
15 ascertaining a "location" or using a hierarchical tree structure to ascertain a
16 location, as that term is utilized in Applicant's specification. Goldman appears to
17 simply be directed to systems and methods that process information associated
18 with a database so that the information can be presented for viewing by a user.

19 It is unclear, at best, how Goldman's presentation teachings could be
20 incorporated with Dowling's disclosure to render obvious the subject matter of
21 this claim which is recited to ascertain a location associated with location
22 information that is received, by accessing one or more hierarchical tree structures
23 each of which comprising multiple nodes that represent physical or logical
24 locations, and traversing at least one node on the one or more hierarchical tree
25 structures to ascertain a device location. As such, Applicant submits that the

Office has failed to establish a *prima facie* case of obviousness and this claim is allowable.

Claims 42-46 depend from claim 41 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 41, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

Claim 48 has been rewritten in independent form to include the subject matter of claim 47, from which it formerly depended. Claim 48 recites a handheld computing device comprising:

- a location service module configured to receive location information and *ascertain a location associated with the location information by accessing one or more hierarchical tree structures each of which comprising multiple nodes that represent physical or logical locations, and traversing at least one node on the one or more hierarchical tree structures to ascertain a device location;*
- an applet manager operably associated with the location service module and configured to receive and manage applets that can be wirelessly received and that pertain to a location that is ascertained by the location service module;
- an applet runtime environment in which applets that are received can execute to enable a user of the device to interact with a location environment;
- an applet cache in which applets can be cached for use in connection with an ascertained location; and
- a network component configured to establish wireless communication with a network so that applets can be wirelessly received.

In making out the rejection of this claim, with respect to the subject matter appearing in the bold italics above, the Office essentially argues the same

1 combination and rationale using the Dowling and Goldman references. Applicant
2 respectfully disagrees with the Office's interpretation and application of the
3 references and submits that the Office has not established a *prima facie* case of
4 obviousness.

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6 problem described in its background section. Specifically, Goldman is concerned
7 with providing a meaningful and easy way to access information in an information
8 repository, i.e. a database, that provides the detail of information available from a
9 custom program without the time and expense of creating one, as well as the cost-
10 effectiveness of querying an information repository without the uncertainties of
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16 such as database fields and records in the database. Second, Goldman's database-
17 derived hierarchy allows a user to *view* logical subsets of database records.

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20 location, as that term is utilized in Applicant's specification. Goldman appears to
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22 with a database so that the information can be presented for viewing by a user.

23 It is unclear, at best, how Goldman's presentation teachings could be
24 incorporated with Dowling's disclosure to render obvious the subject matter of
25 this claim which is recited to ascertain a location associated with location

1 information that is received, by accessing one or more hierarchical tree structures
2 each of which comprising multiple nodes that represent physical or logical
3 locations, and traversing at least one node on the one or more hierarchical tree
4 structures to ascertain a device location. As such, Applicant submits that the
5 Office has failed to establish a *prima facie* case of obviousness and this claim is
6 allowable.

7
8 **Conclusion**

9 All of the claims are in condition for allowance. Applicant respectfully
10 requests a Notice of Allowability be issued forthwith. If the Office's next
11 anticipated action is to be anything other than issuance of a Notice of Allowability,
12 Applicant respectfully requests a telephone call for the purpose of scheduling an
13 interview.

14 Respectfully Submitted,

15
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